

## How Much Longer Will Moratorium Last?

When will it end? That's what many influenza researchers want to know about the landmark self-imposed moratorium on certain experiments on the H5N1 avian influenza virus that they agreed to earlier this year. The short answer: Who knows?

Initially, the 39 researchers who announced the moratorium on 20 January said it would last just 60 days (*Science*, 27 January, p. 387). But in February, the loosely organized coalition agreed to an indefinite extension to give experts and the public more time to discuss and address concerns about the safety and wisdom of experiments that could alter H5N1 in ways that make the virus more dangerous to humans. (Other H5N1 research, such as the testing of newly detected strains, continued.)

Now, some of the moratorium's signers are eager for research to resume. But many say they are perplexed about how that decision will be reached and who will decide. "I wish I knew how it was going to be resolved," says virologist Robert Webster of St. Jude Children's Research Hospital in Memphis, Tennessee, a moratorium signer who was deeply involved in the flu papers controversy. "We haven't discussed this," says virologist Yi Guan of the University of Hong Kong.

Some key players, meanwhile, predict it will be months before the standstill ends. "We've still got a lot of homework to do ... and some boxes to check" before the moratorium should be lifted, believes Anthony Fauci, the head of the National Institute of Allergy and Infectious Diseases (NIAID), which funded the controversial studies by Ron Fouchier of Erasmus MC in

Rotterdam, the Netherlands, and Yoshihiro Kawaoka of the University of Wisconsin, Madison, and the University of Tokyo. Although Fauci isn't a signer of the moratorium, he played an influential role in encouraging Fouchier, Kawaoka, and other leading influenza researchers to organize it.

The researchers reluctantly agreed, driven in part by warnings that governments, reacting to public fears and media reports of "doomsday" viruses, might clamp down on the field if scientists didn't act on their own. Some dubbed the move "Asilomar 2," a reference to the historic 1975 agreement among recombinant DNA researchers that halted experiments in their emerging field until safety guidelines were established.

Before the current moratorium can end, several things have to happen, according to moratorium signers, Fauci, and others:

- The U.S. government must release for public comment a document that explains how universities and private laboratories can help federal funding agencies screen proposed research projects for "dual use research of concern" (DURC) that could be used for good or nefarious purposes. The goal of the new DURC screening program, which was announced in late March and covers 15 "high risk" pathogens including H5N1, is to spot problematic studies before they begin. The document—which is expected to run to nearly 30 pages and will be accompanied by a 100-page background—could be released "sometime this summer," Fauci says.

- Scientists and funders will need to agree on which lines of H5N1 research are—and are not—worth the risks. Particularly problematic, say Fauci and others, are "gain of function" studies, such as Kawaoka's and Fouchier's, in which researchers create mutant viruses that gain capabili-